

## ABSTRACT

A system for automatically detecting the presence of a train located within a detection or surveillance area of a railroad track associated with a railroad grade crossing. The system includes a transmitter unit that transmits a detection signal. The system also includes a receiver that receives a detection signal. A receiver unit receives one or more signals. A processor coupled to the receiver unit is configured to process the received signals and determine the presence, absence or movement of a train or signal within the detection or surveillance area. The processor unit is configured to initiate an action when the processor determines the presence or the absence of the train or one or more detection signals. The current invention also includes a method for automatically detecting the presence of the train located within a surveillance area associated with a railroad grade crossing area.